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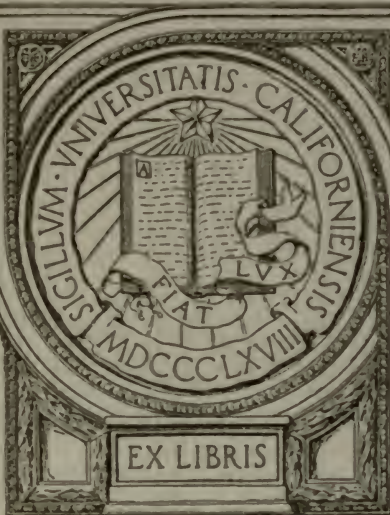
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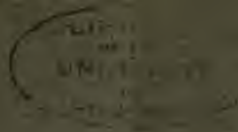
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EXCHANGE
OCT 27 1913



DEPARTMENT OF AGRICULTURE,
TRINIDAD AND TOBAGO.

NOTES
ON
TRINIDAD AND TOBAGO.

Price Three Pence.

TRINIDAD:

PRINTED AT THE GOVERNMENT PRINTING OFFICE, 2, VICTORIA AVENUE, PORT OF SPAIN.

1912.

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THE following notes were prepared originally for the eighth West Indian Agricultural Conference which was held at Port-of-Spain in January, 1912. Having proved of service in affording information regarding some of the agricultural activities of the Colony they are reprinted with a few necessary alterations in the hope that they may be of interest to a larger circle.

This pamphlet makes no pretence to be a general handbook to the Colony. Such a work is already in preparation and its publication is expected shortly

Should a further edition of this pamphlet be called for it is proposed to add information respecting the principal crops and economic plants of the Colony. Meanwhile it will serve its purpose if, as originally intended, it continues to be of utility in affording some guidance to those desirous of visiting or acquiring information as to the work being conducted in the agricultural establishments of the Colony.

March 28, 1912.

NOTES ON TRINIDAD AND TOBAGO.

CACAO cultivation is by far the largest industry of the Colony. Next in order of importance cane sugar and its by-products, asphalt, coconuts, fruit and timber. The exports of these and other products are shown in the table in the next page.

Considerable attention has been given to rubber during recent years and Para rubber (*Hevea brasiliensis*) and Central American rubber (*Castilloa*) are both extensively planted.

In Tobago sugar, cacao and coconuts are the chief crops whilst rubber is relatively more important than in Trinidad, and attention is also devoted to cotton and tobacco.

The islands of Trinidad and Tobago have formed one colony since January 1, 1899. The present Governor is His Excellency Sir George Le Hunte, G.C.M.G., who had previously held West Indian appointments as Administrator of Dominica 1888 to 1894 and Colonial Secretary of Barbados, 1894 to 1897.

Originally discovered by Columbus in 1498, Trinidad has been a British Colony continuously since 1797.

The area of Trinidad is 1,754 sq. miles or 1,195,500 acres of which about 382,500 are under cultivation. It is the second largest of the British West Indian islands.

Tobago is 114 sq. miles, 73,313 acres in area with 10,000 under cultivation

The total population of the Colony in 1911 was approximately 330,093, Port-of-Spain 59,658, San Fernando 8,697, Scarborough (Tobago) 729.

Principal Products Exported.

1903-4.			1910.	
AGRICULTURAL.	Quantity.	Value.	Quantity.	Value.
Cacao ...	322,804 cwt.	£ 897,033	516,595 cwt.	£ 1,230,097
Sugar ...	807,687 „	435,931	924,953 „	723,949
Molasses ...	328,352 gal.	7,001	743,679 gal.	10,433
Rum ...	127,068 „	6,355	191,641 „	9,587
Bitters ...	28,130 „	28,130	33,521 „	33,521
Coconuts ...	9,985,207	20,041	18,872,962	66,651
Copra ...	2,361,803 lb.	10,721	2,046,621 lb.	18,707
Coconut Meal ...	...	285		
„ Oil ...	36,715 gal.	4,526	2,086 gal.	432
Fruit ...	...	1,280	...	19,952
Rubber ...	...	...	7,376 lb.	1,395
Cotton ...	...	...	11,315 „	626
Lime Juice ...	5,205 „	864	4,324 gal.	1,287
Timbers ...	...	4,472	...	19,715
Live Plants ...	...	325	...	550
Live Stock ...	96	231	140	507
Hides & Skins ...	...	..	4,568	4,584
NON-AGRICULTURAL.				
Asphalt ...	192,221 tons.	204,126	158,983 tons.	179,146
Total Exports (Produce of the Colony) }		£1,621,321		£ 2,328,377

Railway.

The railway is a Government Service; lines run from Port-of-Spain to:—

(1.) ARIMA AND SANGRE GRANDE. 16 miles, time 1 hr. 30 min.

Through trains to and from Sangre Grande:—

Leave Port-of-Spain 8.29* a.m. 1.18 p.m. 5.23* p.m.

Leave Sangre Grande 6.32* a.m. 10.45 a.m. 3.28* p.m.

There is a more frequent service of “local trains” as far as Tacarigua.

The line between Port-of-Spain and Arima was the first portion laid of the railway, dating from 1876, the extension to Sangre Grande was opened in 1897. On leaving Port-of-Spain it passes the Railway Workshops, etc., the Saw Mill, Abattoir, etc., the quarry where limestone is obtained and lime made. The mangrove swamps of the Laventille district are skirted and later an area under coconut cultivation. This property was formerly badly affected by disease which has however been got under by the work of the Mycologist and Agricultural Inspector. San Juan is the station for the Santa Cruz Valley. From St. Joseph Station, the nearest point on the line to the Maracas Falls, the Government Farm

* Trains so denoted run on Sundays as well as week days.

buildings are in sight; the line then passes alongside the Government Farm and St. Augustine Estate to a little beyond the point where the San Fernando line branches off. The route affords excellent views of the hills of the northern range. After leaving St. Augustine, sugar is the predominant cultivation as far as Arima. Incidentally large quantities of bamboo are seen; their wide distribution is due to cultivation in previous years as additional fuel in sugar manufacture. Indian cattle (Zebus, introduced in 1879) are often well seen near Tacarigua. Beyond Arima the line traverses a piece of barren land the Aripo Savannah the view of which with its Moriche palms (*Mauritia setigera*) near Cumuto Station being particularly striking. There is an excellent description of the savannah in Kingsley's *At Last* Chap. XII. Thence the route is through a district where cacao predominates.

From Sangre Grande a ten mile drive affords access to Manzanilla whence the road is along the beach with its almost unbroken belt of coconuts. The Cocal is also graphically portrayed in *At Last* Chap. XIII.

(2.) SAN FERNANDO. 35 miles, time 1 hr. 50 mins.

Leave Port-of-Spain 7.26* a.m. 11.51 a.m. 4.35* p.m.

Leave San Fernando 7.05* a.m. 11.50 a.m. 4.14* p.m.

The line passes rice cultivation (St. Joseph to Cunupia) thence sugar chiefly, with some cacao, for the whole route. Near Claxton Bay where the line skirts the shore, mangrove swamps, some rice, coconuts, etc., are seen.

A private line connects San Fernando with the important group of sugar estates in the neighbourhood. An extension of the Railway to Siparia will soon be commenced.

From San Fernando there is a regular steamer service to La Brea (for the Pitch Lake), Guapo, Cedros, and Icaos.

(3.) PRINCES TOWN. 43 miles, 2 hrs. 20 mins.

Leave Port-of-Spain 7.26 a.m.* 11.51 p.m. 4.35 p.m.*

Leave Princes Town 6.31 a.m.* 11.16 a.m. 3.40 p.m.*

The route is the same as far as Marabella Junction just outside San Fernando, thence by the branch line, four miles, through sugar and a little rice.

(4.) TABAQUITE. 30 miles, time 1 hr. 30 mins.

Leave Port-of-Spain 7.26* a.m. 11.51 p.m. 4.35* p.m.

Leave Tabaquite 7.15* a.m. 10 a.m. 4.24* p.m.

The route is the same as far as Jerningham Junction (15 miles) whence a branch line runs through almost continuous

* Trains so denoted run on Sundays as well as week days.

cultivations of cacao, together with a certain amount of *Hevea* and *Castilloa* rubber.

From Tabaguite extension of the line is in progress, the first sod having been cut by His Excellency the Governor on September 29, 1911.

Port-of-Spain.

Port-of-Spain, the capital of Trinidad, is situated near the north-western corner of the Island on the shore of the Gulf of Paria. It is an important and safe port being well sheltered and not subject to storms. Trinidad, lying out of the path of the hurricanes which occasionally visit parts of the West Indies during certain months of the year. Port-of-Spain is the head quarters of the Royal Mail. Not only is it the centre of the political, commercial and social life of the Colony, but it is also of importance as an *entrepôt* of trade with the neighbouring mainland. The following notes are offered of matters of interest :—

Means of Transport.

ELECTRIC TRAMS.—There is an excellent service of electric cars running at regular intervals of 15 minutes. All services have one terminus at the Railway Station and run thence to : -

- (a.) *St. Ann's*, via Frederick street and the eastern side of the Savannah. (Red light at night).
- (b.) *St. Clair*, via Frederick street and the western side of the Savannah. (Green light).
- (c.) *Belmont*. (Blue light).
- (d.) *Four Roads*, via Woodbrook and Cocorite. (White light).

In addition to meeting at the Railway Station all the cars pass the Transfer Station at the junction of Frederick and Park Streets, where passengers who have previously obtained a transfer ticket may change from one car to another without paying additional fares. The cars are timed so that those of services (b), (c), and (d) arrive simultaneously at the Transfer Station. The *St. Ann's* Car reaches the Transfer Station about seven minutes later. The times of starting from the terminal points of each route are :—

ST. ANN'S	{ <i>St. Ann's</i>	—5.50; 6.5; 6.20; 6.35 to 10.35.
	{ Station	—6.12; 6.27; 6.42; 6.57 to 10.57.
ST. CLAIR	{ <i>St. Clair</i>	—5.56; 6.11; 6.26; 6.41 to 10.41.
	{ Station	—6.19; 6.34; 6.49; 7.4 to 11.04.
BELMONT	{ <i>Belmont</i>	—5.56; 6.11; 6.25; 6.41 to 10.41.
	{ Station	—6.18; 6.33; 6.48; 7.3 to 11.03.
FOUR ROADS	{ <i>Four Roads</i>	—5.43; 5.58; 6.13; 6.28 to 10.28.
	{ Station	—6.17; 6.32; 6.47; 7.2 to 11.02.

LIVERY STABLES.

The chief livery stables in the town are :—

Abercromby Stables, Telephone No.	681.
Collie's Stables	481.
King Stables	535.
Haynes-Clark Stables	375.
Caracas Stables	322.
De Silva's Stables	297.

Usual rates single horse 4s. per hour.

Pair horses 8s. 1st hour, 6s. after.

Places of Interest in and about Port-of-Spain.

GOVERNMENT HOUSE.—The residence of His Excellency the Governor, standing in the Royal Botanic Gardens to the north of the Savannah, was erected in 1875, on the site of an older building which was destroyed. The entrance hall contains a full length portrait of Sir Ralph Woodford by Sir Thomas Lawrence, also a copy of a very interesting map of the world dated 1494.

THE RED HOUSE OR GOVERNMENT BUILDINGS—Brunswick Square.—This building is on the site of the former Government Offices which were burned down during the riot of March 23, 1903. On the upper floor are the Council Chamber, Courts of Justice and Judges' Chambers and the Offices of His Excellency the Governor, the Colonial Secretary, Attorney-General and Inspector of Schools. On the ground floor are the offices of the Sub-Intendant of Crown Lands, the Director of Agriculture, the Registrar-General, the Administrator-General, the Crown Solicitor and the Board of Industrial Training.

In the Council Chamber are held the meetings of the Legislative Council, the Board of Agriculture, the Agricultural Society, etc.; it contains a bust of the late Sir Louis de Verteuil.

OTHER GOVERNMENT OFFICES.—The Auditor-General's Office is across the road to the north of the Red House. To the south are the Health Office (used by the Board of Cabildo in Spanish times) and the Fire Brigade Dépôt. In St. Vincent street, from south to north, are the Treasury (formerly the Governor's residence), with Bonded Warehouses attached, the Savings Bank, General Post Office, and Police Barracks, a handsome stone building in Moorish style. The Public Works Department and Immigration Office are in Edward street, and the Custom House, Harbour Master's Office and Railway Station on the wharf.

The Government Foundry in Richmond street is a recent addition.

Amongst other Government buildings (omitting for the present those of the Department of Agriculture) may be mentioned the Royal Gaol in Frederick street dating from 1812 and one of the oldest buildings in the town; the Colonial Hospital with adjoining Bacteriological Laboratory at the northern end of Charlotte street; the Lunatic Asylum in St. Ann's Valley; the St. James's Barracks on the car-line to Four Roads, formerly used by the Military stationed here and now used as Constabulary Headquarters; the Leper Asylum, Cocorite, on the way to Four Roads terminus.

THE BOYS' REFORMATORY is beyond Four Roads on the road to River estate.

Down the islands are the Floating Dock, the prison at Carrera, the Immigration Dépôt and Quarantine Stations.

HOLY TRINITY CATHEDRAL (Anglican).—Brunswick Square, facing the Public Library. The Cathedral dates from 1823, during the Governorship of Sir Ralph Woodford, a monument of whom by Chantrey is in the nave. The altar of cedar, the choir stalls of mahogany, and the roof of hard-wood are excellent examples of West Indian workmanship. The Bishop's Chapel was built in 1896 as a memorial to Bishop Rawle to whose generosity the cathedral owes its peal of eight bells. The marble reredos, erected by public subscription as a memorial to Bishop Hayes was dedicated in 1911.

THE CATHEDRAL OF THE IMMACULATE CONCEPTION.—(Roman Catholic) situated in Marine Square, owes its existence to Sir R. Woodford, of whom it also contains a monument by Chantrey. The foundation stone was laid in 1816 and the first service held on April 15, 1832. In it are three Chapels dedicated to the Blessed Virgin, St. Joseph and St. Dominic. The altar, communion rails, and font are of Florentine statuary marble.

THE QUEEN'S ROYAL COLLEGE.—An unsectarian Secondary School was founded in 1863, as Queen's Collegiate School, its name being changed in 1870 to that it now bears. The School was held in the Prince's Building until the present buildings designed and erected by the Public Works Department on the west of the Queen's Park Savannah were opened by Sir Alfred Moloney in 1904. The number of pupils is usually about 200. The present Principal is W. Burslem, Esq., M.A.

ST. MARY'S COLLEGE.—Between Frederick Street and Pembroke Street, is a Roman Catholic Secondary School for day-boys and boarders, conducted by the Congregation of the Holy Ghost. It is affiliated to the Queen's Royal College and follows the same course of studies. The present Principal is the Very Revd. Father E. A. Crehan, D.D.

THE MODEL SCHOOLS, in Tranquillity, are in two blocks one

for boys and one for girls, with residences for the superintendent of each. Accommodation is also provided for a limited number of men who are being trained as school-teachers.

THE CONVENT SCHOOL, in Pembroke Street, is a boarding and day school for girls conducted by the Nuns of St. Joseph of Cluny.

THE PRINCE'S BUILDING, in the Little Savannah south of the Queen's Park Savannah, was hastily erected in 1861 in anticipation of the visit of H.R.H. the Duke of Edinburgh, which unfortunately did not take place. It is now used for concerts, dances and other entertainments.

VICTORIA INSTITUTE in Frederick Street near the Prince's Building was established to commemorate the Jubilee of Queen Victoria. It was opened in 1892, and considerably enlarged in 1901 to include Reading and Recreation Rooms in one of which the Conference meets. The museum contains Leotaud's collection of Trinidad birds, specimens of Trinidad timbers, rubber, cacao, asphalt and other local economic products. Classes in commercial and technical subjects are held and have been attended by about 5,500 between 1898 and 1910. The most recent addition is the building containing workshops and lecture-room for the Board of Industrial Training classes due to the generosity of Messrs. B. H. & J. W. Stephens; and it is proposed to enlarge the Institute as a memorial to the late King Edward.

Patron, Sir George R. Le Hunte, G.C.M.G.; *President*, B. H. Stephens, Esq.; *Vice-Presidents*, John H. Smith, Esq., Lieut.-Colonel Collens, V.D.; *Hon. Treasurer*, L. O. Inniss, Esq.; *Hon. Secretary*, Dr. G. Masson.

THE PUBLIC LIBRARY, on the north side of Brunswick Square, was founded in 1851; the present building being opened in 1902. There is a free public reading room, well supplied with newspapers, etc., also another reading room open to subscribers. The Library of some 20,000 volumes is available to subscribers.

THE OFFICES OF THE TOWN COMMISSIONERS are in Brunswick Square, adjacent to the Public Library. They contain oil paintings of General Picton and other Governors of Trinidad.

Other institutions and buildings under the control of Town Commissioners are:—

The Market—in Charlotte Street.

The Abattoir, opened in 1910,—at La Basse, close by Railway Station.

The Sewerage Pumping Station—at Mucurapo, on the shore, about two miles to the west of the town.

The Ariapita Almshouse—in Scott Bashe Street.

The St. Clair Pumping and Filtration Station, adjoining St. Clair Experiment Station.

The Waterworks and Reservoir—in the Maraval Valley.

The Water Reservoir on Knaggs' Hill—just above the St. Clair terminus of the tram cars.

The Pumping Station at River estate, Diego Martin.

A visit to the market in the early morning affords an easy method of seeing many of the chief vegetables, fruits, fish and other edible products of the Island. The Abattoir is used largely for Venezuelan cattle, much of the beef consumed in the island being imported from the mainland.

THE COMMERCIAL NEWS ROOM adjoining the Harbour Master's Office is on the site of the old Battery, which was on the sea front before the fore-shore was reclaimed. Here are to be found English and many foreign newspapers and periodicals. The room belongs to the Chamber of Commerce which holds its meetings here.

President, W. Gordon-Gordon, Esq. ; *Vice-President*, J. H. Smith, Esq. ; *Hon. Secretary*, Hon. Adam Smith.

HOTELS.—Queen's Park Hotel, Queen's Park West.

The Ice House, Marine Square.

Hotel de Paris, 7, Abercromby Street.

CLUBS.—Savannah Club, Queen's Park West.

Union Club, Marine Square.

St. Clair Club, Maraval Road, a recreative club of which ladies are also members.

BANKS.—Colonial Bank, Marine Square. Manager, E. L. Atkinson, Esq.

Royal Bank of Canada, Marine Square. Manager, A. S. Creighton, Esq.

DEPARTMENT OF AGRICULTURE.

The Department of Agriculture for Trinidad and Tobago was formed in 1908 by the linking together of the previously separate organisations, the Botanical Department, the Government Laboratory, the Government Farms, St. Augustine and River Estates. It is thus similar in its constitution and manner of origin to the Department of Agriculture in Jamaica and the Department of Science and Agriculture in British Guiana. The estimates of the Department for 1910-11, including the expenditure on St. Augustine and River Estates amounted to about £17,000 and the revenue to about £7,000.

The Department issues the *Bulletin* and *Circulars* one copy of each of which is supplied free to *bonâ fide* planters in the Colony. Additional copies and copies to other than local planters may be purchased.

The work of the different branches of the Department is summarised below : —

Head Office.

The Director's Office where the general administrative work of the Department is conducted, is in the Red House. A part of the Library of the Department is housed here and the books and periodicals can be consulted during office hours (8 a.m. to 4 p.m.) by planters and others. A beginning has also been made with a collection of insect and fungoid pests, manures and other specimens of agricultural interest.

STAFF.

Director, Professor P. Carmody, F.I.C., F.C.S.

Assistant Director, W. G. Freeman, B.Sc., A.R.C.S., F.L.S.

Royal Botanic Gardens.

The Trinidad Botanic Gardens are amongst the oldest Institutions of their kind in the West Indies. Those of St. Vincent are easily first, dating from 1765. The Bath Garden of Jamaica was established about 1774 and the Botanic Gardens, Martinique destroyed in 1902, in the early years of the last century. The Trinidad Gardens was established in 1818 during the Governorship of Sir Ralph Woodford, under the direction of Mr. D. Lockhart, when many plants were transferred from St. Vincent to Trinidad. Lockhart who had been an Assistant Botanist on Captain Tucker's expedition up the Congo in 1816 and also travelled in South America, discovered and introduced several interesting and valuable plants, including the Saman (*Pithecolobium Saman*, Benth). Lockhart was succeeded in 1846 by Purdie, Botanical Collector at Kew, who in that capacity had visited the West Indies and South America and introduced the Vegetable Ivory (*Phytelephas macrocarpa*) amongst other useful plants. He was sent to Porto Rico by the Trinidad Government to study sugar cultivation and manufacture in 1851 and in 1854 he died and was buried in the Gardens.

Dr Crueger was the next Superintendent of the Gardens. He like Purdie was a keen Collector and considerably extended knowledge of the flora of the Colony. He died in 1864. Crueger was succeeded by Mr. Henry Prestoe, who during the next twenty-two years did much to maintain and increase the reputation of the Gardens. Prestoe retired on pension in 1886.

Mr. J. H. Hart was appointed in 1887, after previous service in the Botanical Department of Jamaica, and held office

until his retirement in 1908. During this period the department was considerably enlarged. St. Clair Experiment Station was added in 1898. Hart brought into order the valuable collections of herbarium specimens amassed by his predecessors and greatly added to them. The *Bulletin of Miscellaneous Information* was commenced by him in 1888 and edited continuously for the next 20 years. His general agricultural work is well known. Dr. (now Sir) D. Morris wrote of him and his work in 1898, "The Botanic Gardens in Trinidad at present are amongst the most efficient of any in the colonies. Mr. Hart, the Superintendent, is an energetic, capable officer who is devoted to his work."

After the creation of the Department of Agriculture in 1908, Mr. J. B. Carruthers was appointed Government Botanist and Superintendent, Royal Botanic Gardens. He assumed office in September, 1909, but died in July, 1910. His brief tenure of office was characterized by the great zeal he devoted to rubber cultivation and by the clearing and opening up of part of the Gardens, and the addition of the rockery. The present Government Botanist assumed duties in May, 1911.

The Botanic Gardens are on the northern side of the Savannah. Government House, situated in the Gardens, overlooking the savannah, is a handsome building of local limestone erected in 1875. The front of the Gardens is laid out in lawns with specimens of palms and ornamental trees and shrubs. Behind Government House the Gardens run up the St. Ann's hills on which approached by three shady paths is a little building the "Look Out" at an elevation of about 300 feet from which a magnificent panorama of the city and gulf is obtainable. As is well known, Kingsley devoted many pages of *At Last* to description of the Gardens. Kingsley, on his visit to Sir Arthur Gordon (subsequently Lord Stanmore) in 1869, resided in a cottage just outside the Gardens, the former Government House having been destroyed by fire. Behind Government House, in the north-east corner of the Gardens, is the nursery for ornamental plants, a herbaceous garden recently started, the fern houses, and the residence of the Government Botanist. Adjacent to the fernery is a plot of Thornton's Hybrid Cotton, also one of the first introduced trees of *Hevea brasiliensis*. At the western end of the Garden a picturesque, narrow pathway leads up the Emperor Valley, which contains two of the oldest *Hevea* trees and the parent tree of *Castilloa elastica* of the Island. The two *Hevea* trees in the Valley, Nos. 12 and 13, yielded together 595lb. of rubber in February and March, 1910, and 18lb. 5oz. between July and November, 1911. The Gardens are open daily from 6 a.m. to 6 p.m. A band plays in the front near Government House on Wednesdays and Sundays from 5 p.m. to 6 p.m. and once a month on moonlight nights. Vehicular traffic is not allowed in the Gardens.

The Botanical Department also has charge of the trees on the Savannah, and since March, 1912, of those on the Wharf also, the grounds of the Red House, St. Clair Square and Colony House, San Fernando.

St. Clair Experiment Station.

The Station is situated at the north-west corner of the savannah between the Maraval and Serpentine Roads. The car terminus is quite close to the main entrance. The Station was formed in 1898 to afford facilities for more work of an economic character than was practicable in Government House Gardens. Unfortunately like the latter the soil is poor and it is not possible to carry out experimental work on a scale and under conditions which would render the results generally useful for the guidance of planters. The need, however, for this work at St. Clair is less urgent since the acquisition of St. Augustine and River estates to which the experimental work on a large scale has been transferred.

The administrative offices of the Botanic Department are contained in the building on the right hand side of the main road leading in from the savannah entrance. This building also contains the Herbarium and Library and closely adjacent is the Reference Collection (commenced in 1911) and the Meteorological Instruments and Seismograph. The large upper room has temporarily been allotted to the use of the officers of the Board of Agriculture.

St. Clair also contains the nurseries of economic plants from which in 1910-11 close upon 50,000 plants were distributed. Between April 1 and December 31, 1911, the number was 37,324.

Amongst features of interest in the station are the collection of budded oranges from Florida on either side of the main entrance road; the collection of Indian and other mangos to the right and farther down, near the nurseries, the plots of rubber trees, Hevea, Castilloa and Funtumia. Plots of cacao, (Forastero, Kernahan's Criollo, Ceylon Red, Ocumare and Alligator), coffee, camphor, British Honduras mahogany, Sea Island and Thornton's Hybrid cotton, fruit trees and various other economic plants are also to be seen. A limited number of Agricultural Students are attached to St. Clair and given plots to cultivate for their own use. The station is opened to the public daily except Sundays from 7 a.m. to 6 p.m. Carriages are admitted.

STAFF.

Government Botanist and Supt., Royal Botanic Gardens—
W. G. Freeman.

*Assistant Supt. and Curator—*F. Evans.

Botanic Station Tobago.

The Botanic Station is situated in Scarborough close to the landing quay. The Imperial Department contributed considerably towards its upkeep between 1898, the year it was established, and 1906, since when it has been maintained by the local Government. The Station is picturesquely situated on undulating land and contains many interesting plants. Cacao has done well since removal of shade and application of mulches. Mr. W. E. Broadway is the Curator.

Government Laboratory.

The Government Laboratory is situated near the top of Frederick Street, next to the Victoria Institute. The first building, dating from 1872, was burned down on September 27, 1896, after which the present Laboratory was erected on the same site.

Previous to 1872, Chemistry was taught at the Queen's Collegiate School (now Queen's Royal College) by Henry W. Caird, M.A.

The first Officer in charge of the Laboratory was Professor E. C. Francis, appointed June 24, 1875, and well-known for his investigation of the chemical properties of sweet and bitter cassava. He was succeeded in September 20, 1879, by Professor J. McCarthy, who held office until 1889 when Professor P. Carmody the present Director of Agriculture was appointed Government Analyst and Professor of Chemistry.

The Analytical Department deals annually with a large number of samples sent for analysis. These may be classified under the heads of:—Revenue, Criminal Cases, Sanitary, Agricultural and Industrial, Miscellaneous and Unofficial. This work steadily increases, the number for 1880–89 being 660, 1890–99 9,511, 1900–09 15,267. For the two years 1909–11 the total was 2,674. Regular monthly analyses are made of Port-of-Spain and San Fernando water supplies.

The Laboratory has also an Educational side, conducting courses in Chemistry and Agricultural Science for the boys at Queen's Royal College and St. Mary's College. The work both theoretical and practical, in connection with these courses, is conducted in the Laboratory building. School teachers also receive a special course of instruction in Agriculture at the Laboratory as part of their twelve months training in the Model School.

STAFF.

Analytical branch :

Government Analyst—Professor P. Carmody, F.I.C., F.C.S.

Principal Assistant Analyst—H. S. Shewsbury, F.I.C.

Assistant Analyst.—J. de Verteuil, F.C.S.

Assistant Analyst—A. E. Collens, F.C.S.

Educational branch :

Assistant Analyst and Science Master—C. H. Wright,
B.A., F.I.C., F.C.S.

Government Farm.

The Government Farm started in 1879 by the then Government Veterinary Surgeon Mr. J. B. White, was formerly at St. Clair, adjoining the Experiment Station, but its original site is now partly occupied by the large mansions facing the savannah, St. Clair Square and the adjacent residential neighbourhood. The removal to its present site at St. Joseph, about six miles from Port-of-Spain, took place in 1901.

It is interesting to note that the Manager's house is on the site of the building in which Don José Maria Chacon, the last Spanish Governor, signed the treaty of capitulation to Sir Ralph Abercromby in 1797.

Close by the Manager's office is a Royal Palm, one of two planted by our present King and the late Duke of Clarence when they visited Valsayn.

Mr. C. W. Meaden was the Manager from 1895 to 1909 and was succeeded in 1910 by the present Manager Mr. John McInroy, who also manages the adjoining St. Augustine Estate; (the latter appointment he has held since 1900.)

The Farm which is 350 acres in extent is chiefly devoted supplying Milk to Government Institutions, etc., and to the raising of stock; introduction of special breeds being effected with the object of improving the races of animals in the Island. Mr. White in his report for 1886 wrote :—

"The primary object of the Government in founding the dairy was to secure pure milk for the public Institutions at a reasonable cost and as a subsidiary measure the improvement of the horned stock of the Colony should receive its consideration."

In 1911 79,801 Imperial quarts of milk were sold.

Sales of surplus stock have been held annually since 1883. The stock at the Farm in December, 1911, comprised :—

Cattle.

Pure Bred Zebus	...	...	53
" " Red Poll	...	...	1
" " Holstein	...	...	7
" " Jersey	...	...	3
" " Guernsey	...	...	2
" " Shorthorn	...	...	1
Half and three-quarter Bred	...	...	478
Total	...	...	545

Horses.

"Marat"—Thoroughbred Stallion.

"Sir Horry"—Hackney Stallion.

"Monolier"—Trotting Stallion.

Mares.

Donkey.

"Kentucky Joe"—Stallion.

Pigs.

Berkshire, Poland, China and Tamworth breeds are kept.

Poultry of the following breeds:—Black Minorcas, Rhode Island

Red, Plymouth Rock, and Brahmas, Pekin Ducks, Guinea Fowls, and Great Kind Pigeons.

Zebu Cattle were first imported in 1879, and the Indian Water Buffalo is first mentioned in Mr. White's report for 1886.

A branch establishment is maintained in Tobago as a Stud Farm, under the management of Mr. H. Meaden.

St. Augustine Estate.

This estate, comprising the formerly separate estates of Santa Margarita, Santa Rita, Auzonville, Monte Grande, St. Gill, St. Augustine, Valsayn, La Vivier, Lower Caroni (or New Works) Mount Hope, which lies to the North and West of the Government Farm was purchased by the Government in 1900. It includes not only the lands to the right (east) of the railway line, but also stretches to the summit of the hills to the left. A portion of this area Mt. Hope is, under cacao. The total area of the estate when obtained was 3,785 acres, but 379 acres have since been sold and became the residential quarter of St. Joseph. The Director of Agriculture resides in the estate house of St. Augustine and the old house of Santa Rita has recently been rebuilt by the estate for the occupation of the Warden.

The Estate was originally purchased for \$45,600; the subsequent capital expenditure on new roads, bridges, buildings and other lands has amounted to \$31,901.50, making a total of \$77,501.50. Of this \$75,871.80 has been recouped by the sale of a part of the land, also machinery and railway and other materials from the previous sugar works. The estate up to March 31, 1911, has repaid all but \$8,200 of the money advanced before or subsequent to its purchase and at the same date its assets amounted to \$193,230. It is administered by the Department of Agriculture on an advance account and not in the ordinary manner of a Government Department by annual votes.

The estate derives revenue from the rents of village lots, cane, ground provision and rice lands.

Banana cultivation has been taken up on a moderate scale. At first the results were the reverse of satisfactory owing to the prevalence of disease amongst the Gros Michel variety which was then cultivated. By the substitution of the Governor banana (a local name for the Dwarf or Canary banana *Musa Cavendishii*) and rotation of crops, the disease has been got under control and recently has not caused serious trouble. The Bananas are shipped regularly to the British West Indian Fruit Company at Southampton by the Royal Mail Steam Packet Company's steamers. The fruit is sent uncrated and travels well. In 1910-11 the sale of bananas realized \$7,906 10 against an expenditure (including rent of land) of \$4,811 15 leaving a balance of \$2,664 95 on cultivation of 86 acres.

A series of manurial experiments carried out by the Department have shown the value of pen manure. During 1911 experimental work was extended and large scale plots laid down of cacao, rubber, sugar cane, camphor, cotton, Indian corn, soy beans and other legumes, tobacco, etc., amounting in all to some 30 acres.

River Estate.

The River Estate in Diego Martin in the north-west corner of the Island and about nine miles from Port-of-Spain was acquired by the Government in 1897 in order to protect the sources of the water supply for the city. The general configuration of the estate is a natural amphitheatre with an opening to the south. On all other sides timber-covered hills rise to an average elevation of 500 feet. The northern side of the hills drops steeply to the sea. On this ridge are situated the North Post Signalling and Wireless Telegraphy Stations, and the well known Blue Basin.

The soil is a light sandy loam and the average rainfall about 75 inches. The flat lands forming the floor of the amphitheatre are almost all under cacao, which also extends in some parts up the lower slopes of the hills. Other portions of the hills are being planted in Hevea and British Honduras mahogany. Later limes will probably be tried as well. The upper slopes will always be maintained under forest in order to conserve the water supply, the pumping station for which (under the control of the Town Board) is situated on the level near the Manager's house.

Originally acquired in 1897 at a cost of £4,629 11 4½ the estate has to March 31, 1911, expended a further sum of £8,031 8 0 in purchasing contracts and in other capital expenses and has already repaid £10,509 15 8½. It is worked by the department on the same system as St. Augustine Estate, i.e., under an advance account.

In the year 1904-05 the number of cacao trees on the

estate was 24,000. By the taking over of contracts the number was increased to 58,000 by March, 1911. During 1911 more contracts were taken over and in December 1911 the total number of cacao trees amounted to 95,865. At the present time (Jan. 1912) there are 200 acres containing approximately 60,000 trees in the hands of contractors.

The crop returns have been as follows :—

1904-5 . . . 30,000 lb. (or 182 bags of 165 lb. each.)

1910-11 . . . 70,000 „ (or 424 „ „)

The estate is also used for conducting manurial experiments on cacao on a large scale and under ordinary estate conditions. The additional expenses these experiments entail, about £120 per annum, are defrayed from Departmental votes. Amongst features of interest to cacao planters are the new sweat boxes, lined with concrete, erected in 1910; these have proved very satisfactory in working. Reinforced concrete has also been used in the construction of the drying house, resulting in considerable increase in durability.

River estate bears witness, as also St. Augustine, to the decay of Trinidad's former premier industry, the old sugar works being a conspicuous feature of the estate yard.

A limited number of boys are taken at River estate as Agricultural Students and trained under strictly estate conditions to equip them for posts as drivers and overseers.

The manager of River Estate is Mr J. C. Augustus.

THE BOARD OF AGRICULTURE.

The Board of Agriculture of Trinidad and Tobago was established in 1908, during the Governorship of Sir Henry Moore Jackson. The Board consists of His Excellency the Governor (President) the Director of Agriculture (Vice-President) and twenty members nominated by the Governor.

The present members of the Board and its Officers are as follows :—

President—His Excellency the Governor.

Vice-President—The Director of Agriculture.

Secretary—A. Devenish.

Hon. Sir G. T. Fenwick, K.C.M.G.

„ Mr. C. de Verteuil.

„ „ W. G. Kay.

„ „ R. S. A. Warner, K.C.

Mr. J. P. Bain.

Lieut.-Colonel J. H. Collens, V.D.

Mr. Joseph D'Abadie.

„ L. de Verteuil.

„ W. Greig.

„ J. J. McLeod.

Mr. J. L. Moodie.

„ H. E. Murray.

„ Louis Scheult, B.Sc.

„ E. L. Sellier.

„ T. Thornton, A.R.C.S.

„ J. H. Wade.

„ J. W. Arbuckle.

„ Norman Lamont.

Rev. Dr. J. Morton.

Mr. W. G. Freeman.

Mycologist—J. B. Rorer, M.A.

Entomologist—F. W. Ulrich, F.E.S., C.M.Z.S.

Assistant Entomologist—P. L. Guppy.

Assistant in Laboratory—H. A. Caracciolo.

Agricultural Inspectors— { L. A. Brunton.
F. T. Farfan.

The formation of the Board arose from an offer of the planters of the Colony to raise funds by a voluntary tax on certain crops, for the purpose of employing experts for dealing with insect and fungoid pests, carrying on experimental work and collecting and distributing agricultural information and statistics. These funds are under the control of the Board which also advises the Government on matters of importance affecting the Department of Agriculture.

The taxes are levied at present on cacao, sugar and coconuts, the rates being determined annually by the Board and submitted to the Legislative Council for approval.

For January to December 1912 the rates on the exports of these products and the estimated revenue are :—

Product.	Probable Export.	Rate.	Estimated Yield.
Cacao	50,000,000 lb.	1d. per 100 lb.	£2,083
Sugar	90,000,000 „	3½d. „ 1,000 „	1,312
Coconuts	19,000,000 nuts.	2½d. „ 1,000	198
Copra... ..	2,436,000 lb.	7½d. „ 1,000 lb.	76
			£3,669

The laboratory and offices of the Board are temporarily in a portion of the offices of the Department of Agriculture at St. Clair Experiment Station.

In addition to the work accomplished by its own expert staff, the Board provides funds for a series of manurial experiments on cacao, sugar cane, coconuts and cotton; these are carried out by Mr. J. de Verteuil on selected estates.

An important scheme, likely to have far-reaching effects, is the Cacao Prize Competition instituted in 1910. Prizes were offered for competition amongst peasant proprietors and contractors in two selected districts. The Agricultural Inspectors, under the Director of Agriculture and each given charge of a district working there continually for the year, visiting holdings and advising and practically demonstrating good methods. Three hundred and forty competitors entered and the holdings were judged at the end of the year by planters and the Inspectors and prizes to the value of £142 10 0 awarded and distributed by His Excellency the Governor at the Board meeting of December 15, 1911. In 1912 a similar competition will be instituted in other districts.

The work of the officers of the Board is published in *Circulars* of which ten have been issued up to January, 1912.

The meetings of the Board are held monthly in the Council Chamber.

AGRICULTURAL SOCIETY.

The Agricultural Society of Trinidad and Tobago was established in 1894, during the Governorship of Sir Napier Broome, superseding the Central Agricultural Board which had been founded by Sir William Robinson six years previously. It is an unofficial body consisting of some 200 members, but receives a Government grant of £600 per annum. Meetings are held monthly in the Council Chamber, His Excellency the Governor usually presiding. Matters of agricultural interest are dealt with by papers and discussions and the Government refers to the Society subjects on which the advice of its members is desired.

The staffs of the Department and the Board of Agriculture are *ex-officio* members and regularly attend the meetings.

An important branch of the work of the Society is the holding of Agricultural Shows in Port-of-Spain and in country districts. The Agricultural and Industrial Exhibition of 1912 was held from January 29 to February 3 in the Prince's Building and adjacent grounds.

The Society publishes a monthly journal "*The Proceedings of the Agricultural Society, Trinidad & Tobago.*"

OFFICERS 1912.

President—His Excellency the Governor.

Vice-President--Rev. Dr. Morton, D.D.

Secretary-- Edgar Tripp, Esq.

FORESTRY DEPARTMENT

The Forestry Department included under the Department of Crown Lands, is of recent origin. Mr. C. S. Rogers appointed in 1901 being the first Forest Officer. The vote for the Department was £1,000 per annum up to 1910-11 when it was increased to £1,500. Out of this is defrayed salaries, the expenses of the survey, demarcation and plantation work. 266 miles of forest reserves have been demarcated and 85 acres of plantation established since 1908.

PERMANENT EXHIBITION COMMITTEE.

The Permanent Exhibition Committee was established in 1908 by Sir Henry Moore Jackson to arrange for all exhibitions held out of the Colony and the advertising of the Colony.

It receives an annual subsidy from the Government of £200 and such further grants for special purposes as are recommended by the Committee and approved by the Government.

The Committee consists of six members, two nominated by His Excellency the Governor, two by the Chamber of Commerce and two by the Agricultural Society.

The present members of Committee are :—

Chevalier Hugo Hoffman (Chairman), E. Agostini, Esq., Hon. C. L. Dyett, E. C. Skinner, Esq., C. W. Scott, Esq. and Edgar Tripp, Esq. (Hon. Sec.)

The Committee has successfully exhibited in Great Britain and Canada. The most recent display was that at the International Rubber Exhibition, London, 1911, when two of the four silver cups offered for competition amongst the West Indian colonies were gained. One for the most comprehensive West Indian exhibit; the other awarded to the Department of Agriculture for the best exhibit from any West Indian Botanic Station.

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